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10/711,691	09/30/2004	Chad Rue	FIS920040175USI	5690
29371 7590 01/26/2007 CANTOR COLBURN LLP - IBM FISHKILL 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			EXAMINER VANORE, DAVID A	
			ART UNIT	PAPER NUMBER
			2881	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/26/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

DETAILED ACTION

1. Applicant's arguments filed November 16, 2006 have been fully considered but they are not persuasive.
2. Applicant has amended claim 1 to recite that which was previously contained in claim 4, and argues that this limitation is not contained in the Motoi reference, or the other prior art. Attention is drawn to Item 7A of Motoi which is a temperature control means, external to the FIB tool vacuum chamber. When the embodiment set forth in Motoi as including a Peltier element as a thermoelectric temperature control means is located in the FIB chamber, Item 7A controls this element necessarily by applying a current thereto as a thermoelectric temperature control means operates by having such a current applied thereto. It is therefore an inherent feature that some means of sealed and secured electrical connection penetrating the vacuum FIB chamber be present to couple the Peltier element of Motoi to the controller 7A of Motoi to effect temperature control, else the temperature control means of Motoi would not be controllable by controller 7A. The limitation argued and added to claim 1 is therefore contained in the prior art.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Motoi et al. (US 2004/0262516).

5. Regarding claim 1, '2516 teaches an apparatus for manipulating the temperature of a sample used in focused ion beam processing comprising a base member (Fig. 2, #8), a thermoelectric module disposed over the base member (#10), and a sample (#1) mounted on a mounting surface of the thermoelectric module wherein the thermoelectric module is configured so as to reduce the temperature of said sample with respect to an ambient FIB tool temperature (Paragraph 0065).

6. Regarding claims 2, '2516 teaches the thermoelectric module comprises a Peltier device (Paragraph 0067).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3-7 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Motoi et al. (US 2004/0262516), in view of Richardson (US 6,751,516), further in view of Suzuki (US 4,555,626).

9. Regarding claim 3, the above-mentioned prior art meets all claim limitations with the exception of the thermoelectric module is configured to draw heat from the sample and exhaust the heat through the base member. '626 teaches that the thermoelectric

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module is configured to draw heat from the sample and exhaust the heat through the base member (Col. 3, ll. 50-55 and Fig. 1). It would have been obvious to one skilled in the art at the time of the invention to draw and exhaust the heat this way because the base member is cooled by convection or conduction.

10. Regarding claim 5, '626 teaches a thermal ballast module mounted on the base member (Fig. 1, #10).

11. Regarding claims 6 and 7, '626 teaches the claimed invention except for the thermal ballast being adjacent to, or mounted beneath, the thermoelectric module. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to make the thermal ballast adjacent to or mounted beneath the thermoelectric module since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

12. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motoi et al. (US 2004/0262516), in view of Richardson (US 6,751,516), further in view of Suzuki (US 4,555,626), further in view of Harrison et al. (US 2002/0162339).

13. Regarding claim 8, the aforementioned prior art meets all claim limitations with the exception of the construction of the thermal ballast. '339 teaches a thermal ballast comprising a sealed hollow vessel and a plurality of internal fins configured for facilitating heat transfer from the base member to an internal ballast material (Paragraphs 0043, 0044, 0053 and 0054, and Fig. 2, #14 and #11). Although '339 does not explicitly disclose that the ballast vessel and fins are made of high thermal conductive and high heat capacity material, it would be obvious to one of ordinary skill

in the art to fabricate these elements out of heat conductive and capacitive materials to make a more efficient thermal ballast that rapidly removes heat from the sample.

14. Regarding claim 9, '339 teaches a plurality of cooling ports within the base member for receiving a cooling medium circulated there through supplied by a cooling supply line (Paragraph 0065, 0066 and Fig. 3).

15. Regarding claim 10, '339 teaches that the cooling supply line is coupled to a cooling medium connector disposed through insulation (Paragraph 0053).

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A. Vanore whose telephone number is (571) 272-2483. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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David A Vanore
Primary Examiner
Art Unit 2881

dav